

WHAT IS CLAIMED IS:

1. Isolated biologically active Apo-2LI having
at least about 80% sequence identity with native sequence
Apo-2LI having amino acid residues 1 to 181
of SEQ ID NO:1.
2. The Apo-2LI of claim 1 wherein said Apo-2LI has at least about
90% sequence identity.
3. The Apo-2LI of claim 2 wherein said Apo-2LI has at least about
95% sequence identity.
4. Isolated Apo-2LI comprising amino acid residues 1 to 181 of
SEQ ID NO:1.
5. A chimeric molecule comprising the Apo-2LI of claim 1 or claim
4 fused to a heterologous amino acid sequence.
6. The chimeric molecule of claim 5 wherein said heterologous
amino acid sequence is an epitope tag sequence.
7. The chimeric molecule of claim 5 wherein said heterologous
amino acid sequence is an immunoglobulin sequence.
8. The chimeric molecule of claim 7 wherein said immunoglobulin
sequence is an IgG.
9. A dimer molecule comprising a first Apo-2LI and a second Apo-
2LI.
10. An antibody which binds to Apo-2LI.
11. The antibody of claim 10 wherein said antibody is a monoclonal
antibody.

12. Isolated nucleic acid encoding Apo-2LI.

13. The nucleic acid of claim 12 wherein said nucleic acid encodes an Apo-2LI comprising amino acid residues 1 to 181 of SEQ ID NO:1.

14. A vector comprising the nucleic acid of claim 12.

15. A host cell comprising the vector of claim 14.

16. A method of producing Apo-2LI comprising culturing the host cell of claim 15 and recovering the Apo-2LI from the host cell culture.

17. An article of manufacture, comprising:
a container;
a label on said container; and
a composition contained within said container, said composition comprising Apo-2LI.

18. The article of manufacture of claim 17 further comprising instructions for using the Apo-2LI *in vivo* or *ex vivo*.

19. Isolated biologically active Apo-3 polypeptide having at least about 80% sequence identity with native sequence Apo-3 having amino acid residues 1 to 417 of SEQ ID NO:6.

20. The Apo-3 of claim 19 wherein said Apo-3 has at least about 90% sequence identity.

21. The Apo-3 of claim 20 wherein said Apo-3 has at least about 95% sequence identity.

22. Isolated native sequence Apo-3 comprising amino acid residues 1 to 417 of SEQ ID NO:6.

23. Isolated biologically active polypeptide having at least about 80% sequence identity with the extracellular domain sequence of Apo-3 having amino acid residues 1 to 198 of SEQ ID NO:6.

5 24. The polypeptide of claim 23 wherein said polypeptide has at least about 90% sequence identity.

25. The polypeptide of claim 24 wherein said polypeptide is Apo-2LI.

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26. Isolated extracellular domain sequence of Apo-3 comprising amino acid residues 1 to 198 of SEQ ID NO:6.

27. Isolated death domain sequence of Apo-3 comprising amino acid residues 338 to 417 of SEQ ID NO:6.

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28. A chimeric molecule comprising the Apo-3 of claim 22 or the extracellular domain sequence of claim 23 fused to a heterologous amino acid sequence.

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29. The chimeric molecule of claim 28 wherein said heterologous amino acid sequence is an epitope tag sequence.

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30. The chimeric molecule of claim 28 wherein said heterologous amino acid sequence is an immunoglobulin sequence.

31. The chimeric molecule of claim 30 wherein said immunoglobulin sequence is an IgG.

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32. An antibody which binds to Apo-3 or to the extracellular domain sequence of claim 23.

33. The antibody of claim 32 wherein said antibody is a monoclonal antibody.

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34. Isolated nucleic acid encoding the Apo-3 of claim 22, the extracellular domain sequence of claim 23 or the death domain sequence of claim 27.

5 35. The nucleic acid of claim 34 wherein said nucleic acid encodes native sequence Apo-3 comprising amino acid residues 1 to 417 of SEQ ID NO:6.

36. A vector comprising the nucleic acid of claim 34.

10 37. The vector of claim 36 operably linked to control sequences recognized by a host cell transformed with the vector.

38. A host cell comprising the vector of claim 36.

15 39. A process of using a nucleic acid molecule encoding Apo-3 to effect production of Apo-3 comprising culturing the host cell of claim 38.

20 40. A non-human, transgenic animal which contains cells that express nucleic acid encoding Apo-3.

41. The animal of claim 40 which is a mouse or rat.

25 42. A non-human, knockout animal which contains cells having an altered gene encoding Apo-3.

43. The animal of claim 42 which is a mouse or rat.

30 44. An article of manufacture, comprising a container and a composition contained within said container, wherein the composition includes Apo-3 polypeptide or Apo-3 antibodies.

35 45. The article of manufacture of claim 44 further comprising instructions for using the Apo-3 polypeptide or

Apo-3 antibodies in vivo or ex vivo.